

# CDF Operations Report

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## Outline:

- Store summary
- Operational issues
- System tests and improvements
- Access news and quench summary

# Store Summary (June 16 – June 23)

Store	Start	Duration (hours)	Init. lumi ( $10^{30}$ )	Delivered lumi (nb <sup>-1</sup> )	Live int. lumi (nb <sup>-1</sup> )	Live w/Si (nb <sup>-1</sup> )	Comments
4214	6/17 F-Sa	21.2	70.9	2709.8	2387.0 88.1%	1604.3 59.2%	Si cooling back, trig table tests
4215	6/18 Sa	4.1	112.5	1253.7	1200.5 95.8%	1200.5 95.8%	Quench
4217	6/19 Su	12.7	85.5	2193.7	1956.9 89.2%	1956.9 89.2%	EVB cleanup
4219	6/20 M	15.3	55.4	1624.5	1462.3 90.0%	1404.0 86.4%	Electron lens trip, SVT tests
4221	6/21 Tu-W	26.2	91.9	3204.1	2980.1 93.0%	2980.1 93.0%	Electron lens trip
Total		79.6		10985.9	9986.9 90.9%	9146.5 83.3%	

# Operational Issues



- Tevatron came back up Thursday after the ~4 day helium plant saga
- Silicon
  - SVX chiller temperature crept up from -10C to -6C
    - System is sensitive to house chilled water supply used for heat exchanger
  - Compressor trip for SVX chiller
  - Additional temperature fluctuations yesterday (...unstable equilibrium?)
- Download of new SVT patterns to compensate for new beam position
- TDC boards
  - Gap in XFT coverage mediated by masking some XFT trigger channels high
  - Gave over-efficient track triggers, so used HIGHLUM table for Lumi > 70E30
  - Swapped TDC input cables found and fixed, data is recoverable offline
- Accelerator events forced silicon or full detector to standby
  - Electron lens trips, helium compressor swap, tevatron studies
- Other systems behaving nicely for the most part

# System Tests and Improvements



- Beam tests of L1 transverse mass firmware using default trigger table
- No-beam test of CLC multiplicity trigger
- SVT upgrade tests
  - End-of-store (beam) parasitic operation, marked good for physics
  - Between-store (no-beam) tests including new merger boards
- No-beam test of trigger tables with increased “ring-of-fire” shoulder thresholds to keep jet trigger rates under control at higher luminosity
- Ongoing hardware event builder upgrade work (between stores this week)
  - Debugging L3 converter node, problem with gigabit ethernet card
  - Test of new ethernet trigger manager
  - System tests using cosmics, with silicon included
- Tests of L2 code to allow more than 128 trigger bits

# Access Tasks

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- Friday June 17 (6:30am-7:05am):
  - Silicon crew checked fuses for L00 after Friday morning quench
- Tuesday June 21 (2:30am-3:30am):
  - TDC experts found swapped input cables from COT to TDCs

## Quench Summary

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- Friday morning during scraping (9 house quench)
- Saturday evening, terminates store 4215
- Wednesday afternoon during ramping (would have been a big store)
- Wednesday night during low beta tevatron studies